

REMARKS/ARGUMENTS

This Amendment and the following remarks are intended to fully respond to the Final Office Action mailed June 23, 2006. In that Office Action claims 1-23 were examined, and all claims were rejected. More specifically, the specification is objected to, claims 18 and 19 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement; claims 18 and 19 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention; and claims 1-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over IPSEC, "Minutes of IPSEC Working Group Meeting", in view of Kent et al., "Fragmentation Considered Harmful". Reconsideration of these rejections, as they might apply to the original and amended claims in view of these remarks, is respectfully requested.

In this Response, claims 1, 3, 6, 10, 14, 18, 20, and 22 have been amended; claims 4, 5, 9, 19, and 21 have been canceled; and no new claims have been added. Therefore, claims 1-3, 6-8, 10-18, 20, and 22-23 remain present for examination.

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. The examiner states:

Claim 18 comprises the limitation "*wherein the steps of generating, determining and fragmenting are performed independently of performing any steps on the data packet corresponding to a transport layer protocol and/or a network layer protocol.*" The specification fails to provide proper antecedent basis for this limitation.

6/23/2006 Office Action, p. 2, "Specification."

Claim 18 has been amended to remove the referenced limitation and thereby rendering the objection moot. Claim 18 is believed to be allowable and accordingly, applicants request withdrawal of the objection.

Claim Rejections – 35 U.S.C. § 112

Claims 18 and 19 were rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the written description requirement. Amended claim 18 is fully supported by the specification. Claim 19 has been canceled.

Claims 18 and 19 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Amended claim 18 contains no ambiguities. Claim 19 has been canceled.

Claim Rejections – 35 U.S.C. § 103

Claims 1-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over IPSEC, “Minutes of IPSEC Working Group Meeting” (hereinafter “IPSEC”), in view of Kent et al., “Fragmentation Considered Harmful” (hereinafter “Kent”).

Claim 1 discloses *generating and transmitting an IKE packet over a network; determining whether a response to the IKE packet was received; fragmenting the IKE packet into a plurality of smaller packets when a response is not received*. Neither IPSEC nor Kent, nor their combination, teaches or suggests using the absence of a response to an IKE packet to determine whether to fragment IKE packets. IPSEC teaches fragmenting IKE packets above the UDP level, but does not disclose any specific method of determining when to fragment IKE packets. Kent does not remedy this deficiency in IPSEC. Kent discloses details of how to fragment data packets, but does not disclose the transmitting and using the absence of a response to a packet to determine whether to fragment packets before sending them. While Kent teaches determining whether fragmentation has occurred in the IP layer and further fragmenting a datagram in response to determining that fragmentation has occurred, Kent does not teach or suggest basing the decision to fragment an IKE packet on whether or not a response to a transmitted IKE packet has been received, regardless of whether fragmentation has actually occurred in the IP layer. Thus, the combination of IPSEC and Kent fails to teach or suggest a method of transmitting Internet Key Exchange (IKE) data packets across a network comprising,

inter alia, *generating and transmitting an IKE packet over a network; determining whether a response to the IKE packet was received; fragmenting the IKE packet into a plurality of smaller packets when a response is not received*, as described in claim 1.

In view of the foregoing, claim 1 patentably distinguishes over IPSEC in view of Kent. Accordingly, Applicants respectfully request that the rejection of claim 1 under §103(a) be withdrawn. Claim 2 depends from claim 1 and is patentable for at least the same reasons. Accordingly, Applicants respectfully request that the rejection of claim 2 be withdrawn.

Amended claim 3 discloses fragmenting IKE data packets *wherein the fragmenter module does not split the IKE data packets unless no response to a previously-sent IKE data packet has been received*. As explained above, neither IPSEC nor Kent, nor their combination, teaches or discloses using the absence of a response to an IKE data packet to determine whether to fragment future IKE data packets. Thus, amended claim 3 is patentable for at least the same reasons as claim 1. Accordingly, Applicants respectfully request that the rejection of claim 3 be withdrawn.

Amended claim 6 discloses a method for receiving fragmented IKE data packets that includes, inter alia, *determining the total size of all fragments that contain the same identifier and discarding said fragments when the total size exceeds a predetermined limit*. This limitation was previously submitted as claim 9, now canceled. The Examiner rejected this claim on the grounds that it was unpatentable over IPSEC in view of Kent, citing Kent section 2.4, par. 3. Applicants respectfully traverse this rejection. Kent teaches discarding all fragments that contain the same identifier when a receiving buffer is full and fragments from two different data packets have been received. Kent does not teach or suggest *determining the total size of all fragments that contain the same identifier*, nor does it teach or suggest *discarding said fragments when the total size exceeds a predetermined limit*. IPSEC does not remedy this deficiency in Kent. As discussed above, IPSEC merely teaches fragmenting an IKE data packet above the UDP level. IPSEC does not discuss any details of fragmentation or handling of IKE data packets or fragments. Thus, the combination of IPSEC and Kent fails to teach or suggest a method for receiving fragmented Internet Key Exchange (IKE) data packets comprising, inter alia, *determining the total size of all fragments that contain the same identifier and discarding said*

fragments when the total size exceeds a predetermined limit.

In view of the foregoing, amended claim 6 patentably distinguishes over IPSEC in view of Kent. Accordingly, Applicants respectfully request that the rejection of claim 6 under §103(a) be withdrawn. Claims 7, 8, and 10 depend from amended claim 6 and are patentable for at least the same reasons. Accordingly, Applicants respectfully request that the rejection of claims 7, 8, and 10 be withdrawn.

Amended claim 11 discloses a system for transmitting IKE data packets comprising, inter alia, *means for initializing, operating, and monitoring a timer; means for detecting whether the IKE packet was successfully received at the intended receiver node before the expiration of the timer; and means for fragmenting the IKE packets into smaller packets when the IKE packet was not successfully received at the receiver node before the expiration of the timer.* Neither IPSEC nor Kent, nor their combination, teaches or discloses the use of a timer to determine whether to fragment IKE data packets. IPSEC teaches fragmenting IKE packets above the UDP level, but does not disclose using a timer or any other specific method of determining when to fragment IKE packets. Kent does not remedy this deficiency in IPSEC. Kent discloses details of how to fragment data packets, but does not disclose the transmitting end using a timer to determine whether to fragment a packet before sending it. Instead, Kent teaches the receiving end using a “Time To Live” flag to determine whether to discard a packet that has already been received and stored in a buffer. (Kent, section 2.1.) While Kent teaches determining whether fragmentation has occurred in the IP layer and further fragmenting a datagram in response to determining that fragmentation has occurred, Kent does not teach or suggest basing the decision to fragment an IKE packet on whether a timer has expired before receiving a response to a transmitted IKE packet, regardless of whether fragmentation has actually occurred in the IP layer. Thus, the combination of IPSEC and Kent fails to teach or suggest a method of transmitting Internet Key Exchange (IKE) data packets across a network comprising, inter alia, *initializing a timer; determining whether a response to the IKE packet was received before the expiration of the timer; fragmenting the IKE packet into a plurality of smaller packets when a response is not received before the expiration of the timer,* as described in amended claim 11. Accordingly, Applicants respectfully request that the rejection of claim 11 be withdrawn.

Claim 12 depends from amended claim 11 and is patentable for at least the same reasons. Accordingly, Applicants respectfully request that the rejection of claim 12 be withdrawn.

Claim 13 discloses a method of transmitting data packets across a network including, inter alia, *generating and transmitting an Internet Key Exchange (IKE) packet over a network; determining whether a response to the IKE packet was received; and fragmenting the IKE packet into a plurality of smaller packets when a response is not received.* As explained above, neither IPSEC nor Kent, nor their combination, teaches or discloses using the lack of a response to an IKE packet to determine whether to fragment future IKE data packets. Thus, claim 13 is patentable for at least the same reasons as claim 1. Accordingly, Applicants respectfully request that the rejection of claim 13 be withdrawn.

Amended claim 14 and claims 15-17 depend from amended claim 13 and are patentable for at least the same reasons. Accordingly, Applicants respectfully request that the rejection of amended claim 14 and claims 15-17 be withdrawn.

Amended claim 18 discloses a method for transmitting data packets across a network comprising, inter alia, *initializing a timer and determining, based at least in part on the expiration of the timer, whether fragmentation of the data packet is necessary to successfully transmit the IKE information over a network.* As explained above, neither IPSEC nor Kent, nor their combination, teaches or discloses the use of a timer to determine whether to fragment IKE data packets. Thus, amended claim 18 is patentable for at least the same reasons as amended claim 11. Accordingly, Applicants respectfully request that the rejection of claim 18 be withdrawn.

Amended claim 20 discloses a method for resolving transmitting errors associated with transmitting IKE packets including, inter alia, *initializing a timer; determining, based at least in part on the expiration of the timer, whether it is necessary to fragment the IKE data packet; fragmenting the packet, if necessary, with a code module that does not implement the TCP, UDP, or IP protocols before the packet is processed by a code module that does implement the TCP, UDP or IP protocols.* As explained above, neither IPSEC nor Kent, nor their combination, teaches or discloses the use of a timer to determine whether to fragment IKE data packets. Thus, amended claim 20 is patentable for at least the same reasons as amended claim 11. Accordingly,

Applicants respectfully request that the rejection of claim 20 be withdrawn.

Amended claim 22 discloses a method of efficiently managing resources by intelligently discarding fragments of IKE data packets, comprising, *receiving a plurality of fragments of a single IKE data packet, wherein the fragments were transmitted from a transmitting node in an order that can be determined from information contained within the received fragments; determining from information contained within the received fragments whether any of the received fragments have been received in an order that differs from the order in which the fragments were transmitted from the transmitting node; and discarding at least certain of the received fragments when a predetermined number of out of order fragments from a single IKE data packet have been received.* Kent teaches discarding all fragments corresponding to a first IKE data packet if fragments corresponding to a second IKE data packet are received and the receiving buffer is full. (Kent, section 2.4, par. 3.) Kent does not teach or suggest determining whether the order in which fragments corresponding to a *single* IKE data packet were received corresponds to the order in which those fragments were transmitted. Neither does Kent teach or suggest *discarding at least certain of the received fragments when a predetermined number of out of order fragments from a single IKE data packet have been received.* IPSEC fails to remedy this deficiency of Kent. Thus, the combination of IPSEC and Kent fails to teach or suggest all of the limitations of amended claim 22.

In view of the foregoing, amended claim 22 patentably distinguishes over IPSEC in view of Kent. Accordingly, Applicants respectfully request that the rejection of claim 22 under §103(a) be withdrawn. Claim 23 depends from amended claim 22 and is patentable for at least the same reasons. Accordingly, Applicants respectfully request that the rejection of claim 23 be withdrawn.

Conclusion

It is believed that no further fees are due with this Response. However, the Commissioner is hereby authorized to charge any deficiencies or credit any overpayment with respect to this patent application to deposit account number 13-2725.

In light of the above remarks and amendments, it is believed that the application is now

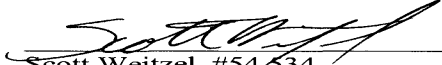
Application No. 10/056,889

in condition for allowance and such action is respectfully requested. Should any additional issues need to be resolved, the Examiner is requested to telephone the undersigned to attempt to resolve those issues.

Respectfully submitted,

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